REMARKS

Claims 1-11 were pending in the application. Claims 1, 3, 4, 5, 7, and 8 have been amended and claims 12-15 have been added. Therefore, claims 1-15 are presented for reconsideration and further examination in view of the foregoing amendments and following remarks.

In the outstanding Office Action the abstract of the disclosure was objected to because it uses claim terminology; claims 1, 5, and 7 were objected to under 37 C.F.R. 1.75 because of informalities; claims 1 and 8 were rejected under 35 U.S.C. 112, second paragraph as being indefinite; claims 1, 2, 4, 5, 8, and 19 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,953,347 to Wong et al.; claims 3 and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wong et al. as per claims 1 and 2 in further view of U.S. Patent No. 6,628,304 to Mitchell et al.; claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Wong et al. as per claim 1 in further view of U.S. Patent No. 5,790,546 to Dobbins et al.; claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Wong et al. as per claim 6 in further view of Dobbins et al.; and claim 11 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Wong et al. as per claim 3 in further view of Mitchell et al.

By this Amendment the Abstract is amended to overcome the objected to language; claims 1, 5, and 7 are amended to overcome the objections; claims 1 and 8 are amended to overcome the rejections under 35 U.S.C. § 112; claims 3 and 4 are amended for clarity; newly added claims 12-15 are presented; and arguments are presented traversing the rejections over prior art.

It is therefore respectfully submitted that the above amendments introduce no new matter within the meaning of 35 U.S.C. § 132.

Amendments to the Abstract

The Examiner objected to the Abstract of the disclosure because it uses claim

terminology on line 5.

In response, the Abstract has been amended to eliminate the claim terminology and for

clarity. Applicants respectfully request that the objection to the Abstract of the disclosure be

withdrawn.

Objections Under 37 C.F.R. 1.75

The Examiner objected to claims 1, 5, and 7 because of informalities. Specifically, claim

1 was objected to because improper claim format is used; and claims 5 and 7 were objected to

because of a typographical error.

In response, claim 1 has been amended to recite "A method for generating..." as

suggested by the Examiner. Claim 5 has been amended to replace "and" with --at-- on line 2.

Claim 7 has been amended to replace "constrains" with --constraints--.

Applicants respectfully request that the objections to the claims be withdrawn.

Rejection Under 35 U.S.C. § 112, 2nd paragraph

The Examiner rejected claims 1 and 8 as being indefinite. Specifically, claim 1 was

rejected because improper claim format is used. Claim 8 was rejected because it is unclear as to

what structure is intended to be covered by "processor."

In response, claim 1 has been amended to recite "A method for generating..." as

suggested by the Examiner. Claim 8 has been amended to recite "A multi-protocol network

management system...comprising a processor capable of carrying out a method of claim 1...by

performing the following steps..." The steps including a determining step and a mapping step.

As all claims now comply with 35 U.S.C. § 112, 2nd paragraph, Applicants respectfully

request that the rejection be withdrawn.

Discussion of Wong et al.

I.   Wong et al. is cited by the Examiner both under the 35 U.S.C. 102(b) alone, and

under the 35 U.S.C. 103 (a) in combination with other references.

Wong et al. relates to an integrated network management system for <u>multiple networks of</u>

<u>different topology domains</u> (emphasis added) that employs hierarchical pass-through routing and

multi-network service management through the network.

The present invention relates to managing <u>a multi-protocol layered network, which IS NOT</u>

<u>THE SAME as multiple networks of different topology domains</u> (emphasis added).

Protocol layers mentioned by the Applicants in the description and the claims are <u>network</u>

<u>portions that operate according to technologically distinct transmission protocols</u> (emphasis added)

For example, the present patent specification on page 3 lines 27-31 mentions such protocol layers as

IP (a packet-based Internet Protocol), SDH (a frame-based Synchronous Digital Hierarchy data

transport protocol) and WDM (Wavelength Division Multiplexing physical transmission protocol).

It should be noted that, in the frame of the present patent application, such network portions may

overlap owing to network elements being capable of operating at more than one technological

transmission protocols.

Applicants point out and emphasize that the model of the Network Management System in Wong et al. (as described in the description and illustrated in all Figures of the Wong et al. patent) comprises different layers <u>being different order bandwidth domains   (col. 1, line 30-31) hierarchically belonging to a technological network operating according to one and the same transmission protocol</u> (emphasis added).

All the figures in Wong et al. illustrate a SONET network divided into a number of layers representing different bandwidth (bit-rate) network domains. All the elements used in these different network domains are elements functioning under the SONET/SDH protocol, just adapted to different bit-rates (see col.2, lines 22-39 in Wong et al.).

The Wong et al. patent can be considered a clear prior art reference wherein, according to the known principle; each protocol layer is conventionally managed by a protocol layer specific NMS application (see specification of the current application, page 1 lines 16-20).

With respect to the Examiner's rejections concerning specific claims, the Applicants reply as follows.

Rejections under 35 U.S.C. § 102(b)

II.   In Section 6 of the Office Action, the Examiner contends that Wong et al. teaches all features of Claims 1, 2, 4, 5, 8 and 10 (the claims are considered anticipated by Wong et al.).

In particular, with respect to Claim 1, the Examiner believes that Wong et al. teaches generating a model of the multi-protocol layered network in lines 45-50 of col.1. However, the mentioned text portion of Wong et al. <u>does not</u> speak about different protocols and/or layers according to different protocols, but just about "integrated management of <u>multiple network of</u>

different topologies [*i.e., configurations*] with a rich Graphical User Interface (GUI) showing network topology [*i.e., configuration*] and network element drawings, real time status monitoring and fault management and full path (service) management and service recovery capabilities" (emphasis added).

Further, contrary to the Examiner's opinion, Wong et al. does not determine protocol layers: lines 32-33 of col. 1 speak about "network manager managing the multiple networks and establishing links within a topology domain". It is clear to those skilled in the art that multiple networks can be of the same protocol or protocol layer. If the protocol layer of the multiple networks is the same (as in all Wong et al. examples), it is definitely not a multiple-protocol layered network and therefore no [different] protocol layers can be determined therein.

The Examiner states that Wong et al. maps an overlay including network elements, physical links, logical links and association links (in Fig. 1-16).

Formally, (emphasis added) Wong et al. does not teach any of the limitations concerning arrangement of the elements and links, which are claimed in the clause (b) of Claim 1.

Informally and in reality, (emphasis added) the meaning of the network elements, physical, logical and association links and their arrangement are different in Claim 1 and in the cited figures of Wong et al.

First of all, the arrangement of elements and links in Claim 1 is defined for different protocol layers. The figures in Wong et al. do not illustrate arrangement and/or association between links placed in different protocol layers, since there are no different protocol layers (but only different bandwidth domains) in the Wong et al. model.

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Secondly, even if the elements of different domains in Wong et al. are associated (by request links shown by arrows between the domains), it should be kept in mind that they are really different elements belonging to different domains. It is confirmed by the Wong et al. description that different types of equipment are recommended to different network domains (for example, col. 2, lines 32-39).

In contrast to Wong et al., in the present application, the network elements connected by association links between different protocol layers are integrated elements capable of operating in more than one protocol layers (emphasis added). See, for example, our Fig. 4, where SDH/WDM elements 6a and 6b are present in both the SDH protocol layer 14 and the WDM protocol layer 16, and are associated by a pair of association links 34A and 34B.

With respect to Claim 2, Applicants argue that Wong et al. does not teach displaying protocols on a GUI. Wong et al. does teach displaying network domains of various bandwidths on a GUI. Wong et al. does not show an overlay of one protocol layer with different technologies employed therein and displayed in visually distinctive manners. For example, in Fig. 1 of Wong et al., a DS1 path shown by a thick line is not a different technology displayed in the domain 3/1, since DS1 of the 3/1 "layer" is a different bandwidth domain but not a different technology compared to the DS3 service of the 3/3 "layer" (emphasis added).

Concerning Claims 4 and 10, again, we wish to repeat that Wong et al. does not disclose displaying protocol layers of the model, be it a 3D model or not since he is only describing different domains of the same protocol layer. Wong et al. does not describe "the pair of association links between each logical link and its associated transmission path". The connection links between the domains in Wong et al. connect elements operating under the same technological protocol.

Concerning Claim 5, Applicants maintain that Wong et al. does not teach distinguishing between alarms generated <u>at a client protocol layer</u> and alarms generated at any of the <u>underlying protocol layers</u> (emphasis added). The fact that Wong et al. teaches "implementing a pass-through routing within a higher order [bandwidth] domain in the hierarchy which, in the event of service failure, initiates a recovery action in a hierarchical manner starting from a domain with the highest order bandwidth" (col. 1, lines 51-59), does not yet mean that any alarms will be distinguished between network domains. Over all, the domains are not protocol layers.

With respect to Claim 8, to be exact, Wong et al. does not mention a processor contained in the Newbridge Networks Corp. Intelligent Network Station (lines 9-17 of col. 1), though the processor should obviously be present there. However, claim 8 depends on claim 1 which we consider novel over Wong et al.

In view of the above, Applicants are persuaded that Wong et al. does not anticipate the present invention, and Claims 1, 2, 4, 5, 8 and 10 are to be considered patentable.

Rejections under 35 U.S.C. § 103(a)

III.   In section 7 of the Office Action, the Examiner considers Claims 3, 6, 7, 9, and 11 to be obvious over Wong et al. in view of Mitchell et al. and/or Dobbins et al.

With respect to Claims 3, 9 the Examiner contends that Mitchell et al. discloses displaying a top level view of the network (lines 32-36 of col. 20). Mitchell et al. discloses a network, but not protocol layers thereof. Wong et al. does not disclose protocol layers either. Therefore, Claims 3 and 9 are non-obvious.

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Claim 6 is rejected by the Examiner since Dobbins et al. is considered to fulfill the Wong et al. reference by determining the best path by utilizing a number of constraints (lines 33-34, col. 36, 44-45 in col.19). Claim 6 can be considered patentable since Claim 1 is novel over Wong et al.

Claim 7 is rejected by the Examiner since Dobbins et al. (cited in combination with Wong et al.) mentions a number of specific constraints for searching a path. However, neither Wong et al. nor Dobbins et al. describe/apply their solutions to different protocol layers. Dobbins et al. neither disclose nor suggest any "protection constraint", or combination with it. In the present patent application, the protection constraint is usually a constraint concerning a path determined on an underlying protocol layer. The protection and other constraints are mentioned on page 7, lines 7-16 of the present application.

Claim 7 is therefore non-obvious in view of the cited references.

Claim 11 is to be considered patentable, since it depends on the patentable claim.

CONCLUSION

In light of the foregoing, Applicants submit that the application is in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicants respectfully

request that the Examiner contact the undersigned attorney if it is believed that such contact will

expedite the prosecution of the application.

Respectfully submitted,

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